1. A process for generating water from hydrogen and oxygen in which hydrogen and oxygen are supplied into a reactor equipped with a material having catalytic action to activate a reactivity of hydrogen and/or oxygen and the reactor temperature is maintained below an ignition temperature of hydrogen and gas containing hydrogen to allow hydrogen and oxygen to react and generate water while preventing combustion of hydrogen and oxygen.

2. The process for generating water of claim 1 wherein hydrogen and oxygen are allowed to react while temperature at a vicinity of a hydrogen and oxygen inlet end of the reactor is held to 200°C to 500°C and temperature in a vicinity of a water outlet end of the reactor is held to about 600°C or lower.

3. The process for generating water of claim 1 wherein a supply ratio of a volume of hydrogen gas to that of oxygen is set to 1:not less than 0.5 or 1:not higher than 0.5.

4. The process for generating water of claim 1, claim 2, or claim 3 wherein the water generated in the vicinity of an outlet end of the reactor is diluted and gas containing water of an optional concentration is guided out.

5. A water-generating reactor in which cylinders made of a material having catalytic action that can activate a reactivity of hydrogen and/or oxygen or a

material whose surface is covered with the material having the said catalytic action are placed in a casing to form passages through which hydrogen and oxygen flows while making contact with inner wall surfaces and/or outer wall surfaces of the cylinders, and a heater is placed outside or inside of the casing.

6. The water-generating reactor of claim 5 wherein hydrogen and oxygen are introduced into the inside of at least one of the cylinders and guided therein to flow towards the outlet end, then guided outside the cylinder to return to flow towards the inlet end, and is thereafter introduced into the inside of another cylinder from the inlet end and guided therein to flow towards the outlet end.

7. The water-generating reactor of claim 5 or claim 6 wherein the cylinder is a pipe made of nickel.

8. The water-generating reactor of claim 5 wherein the cylinder comprises nickel, stainless steel, and Hastelloy cylinder portions connected in series, or nickel and stainless steel cylinder portions connected in series, with the nickel portion located at a water outlet end of the reactor.

9. A water-generating reactor in which columns filled with granules made of a material having catalytic action that can activate reactivity of hydrogen and/or oxygen:

sintered material of powders or fibers made of the material having the catalytic action;

laminates or honeycomb bodies comprising thin sheets made of the material having the catalytic action;

mesh bodies, sponge bodies, or fin-shaped bodies made of the material having the catalytic activity;

or granules sintered materials, thin sheet laminates, honeycomb bodies, mesh bodies, sponges or fin-shaped bodies whose surfaces are covered with the material having the catalytic activity are placed or two or more of these are placed in a casing, and passages are formed for allowing hydrogen and oxygen to flow therethrough while coming in contact with said granules, sintered materials, laminates, honeycomb bodies, mesh bodies, or fin-shaped bodies, and at the same time, a heater being placed outside or inside the casing.

10. The water-generating reactor of claim 9 wherein the material having catalytic action is nickel.

11. The water-generating reactor of claim 5 or claim 9 wherein a hydrogen and oxygen preheating portion is installed at a portion for introducing hydrogen and oxygen into the casing.

12. The water-generating reactor of claim 5 or claim 9 wherein a whole or part of

a surface of the catalyst material in the reactor or a whole surface in contact with gas of the casing, including forward and backward piping systems, is mirror-surfaced-finished.

13. The water-generating reactor of claim 5 or claim 9 wherein a whole or part of the casing, including the forward and backward piping system of the reactor, is made of heat-resistant metal or corrosion-resistant metal.

14. The water-generating reactor of claim 5 or claim 9 wherein a whole or part of the surface of the casing in contact with gas, including the forward and backward piping system, is covered with oxidation-resistant, reduction-resistant, or corrosion-resistant protection film, or is provided with surface-treatment having a performance equivalent to that of the protection film.

15. A water-generating reactor comprising a metal reactor body provided with an inlet and a water and moisture gas outlet and a platinum coating film provided on an inner wall surface of the reactor body, wherein hydrogen and oxygen supplied from the inlet are brought in contact with the platinum coated film to activate a reactivity and water is generated from the hydrogen and the oxygen.

16. A water-generating reactor comprising a reactor body of heat-resistant material and having an inlet and a water and moisture gas outlet, a gas diffusing member in

an internal space of the reactor body, and a platinum coating film on an inner wall surface of the reactor body wherein hydrogen and oxygen supplied from the inlet and diffused by the gas diffusing member are brought into contact with the platinum coating film to activate a reactivity, and water is thereby generated from the hydrogen and oxygen.

17. The water-generating reactor of claim 15 or claim 16 wherein the reactor body is made from heat-resistant metal, and the platinum coating film is 10Å to 0.5 mm thick and is formed by one of a plating method, a sputtering method, a vapor deposition method, a cladding method, an ion plating method and a hot press method.

18. The water-generating reactor of claim 15 or claim 16 wherein the reactor body is made from heat-resistant metal, and the platinum coated film is a film 10Å to 0.5 mm thick formed on a barrier film of a non-metal material on the inner wall surface of the reactor body by one of a plating method, a sputtering method, a vapor deposition method, a cladding method, an ion plating method, or a hot press method.

19. The water-generating reactor of claim 15 or claim 16 wherein the gas supplied to the reactor body is an oxygen rich gas whose ratio of oxygen to hydrogen H_2/O_2 is $H_2/O_2 < ½$ or a hydrogen rich gas whose ratio of oxygen is hydrogen H_2/O_2 is

$H_2/O_2 > 1/2$.

20. The water-generating reactor of claim 16 wherein the gas diffusing member comprises a reflector plate located opposite the inlet and a filter located downstream of the reflector plate or a reflector plate located opposite the inlet, a filter located downstream of the reflector plate, and a reflector plate located opposite the water and moisture gas outlet.

21. The water-generating reactor of claim 16 wherein the gas diffusing member comprises a cylinder, cone, or disk made of a filter placed opposite the inlet.

22. The water-generating reactor of claim 16 wherein the gas diffusing member comprises a disk placed opposite the inlet and having a filter at a periphery portion.

23. The water-generating reactor of claim 18 wherein the barrier film is made of at least one of TiN, TiC, TiCN, or TiAlN.

24. A process for controlling temperature of a water-generating reactor which has a catalyst in a casing that can activate reactivity of hydrogen or oxygen and in which hydrogen and oxygen are allowed to react with each other to generate water at high temperatures, wherein an upstream-end temperature of hydrogen and oxygen under reaction in the said water-generating reactor is held lower than that

of a downstream-end temperature.

25. The process for controlling temperature of the water-generating reactor of claim 24 wherein the upstream-end temperature of hydrogen and oxygen under reaction is held in a range of from 200°C to 500°C and the downstream-end temperature is held at about 600°C or lower.

26. A process for controlling temperature of a water-generating reactor which has a catalyst in a casing that can activate a reactivity of hydrogen or oxygen and in which hydrogen and oxygen are allowed to react at high temperatures to generate water, wherein areas of contact between the catalyst in the casing and a mixture gas are smaller on upstream-end reacting gases than on a downstream-end reacting gases to reduce reaction amounts of oxygen and hydrogen so that a temperature rise at the upstream-end reacting gas is prevented. .

27. A process for controlling temperature of a water-generating reactor which has a catalyst in a casing that can activate reactivity of hydrogen and/or oxygen and in which hydrogen and oxygen are allowed to react at high temperatures to generate water, wherein a catalytic action of the catalyst in the casing is designed to be smaller on upstream-end reacting gases than on a downstream-end reacting gases to reduce reaction amounts of oxygen and hydrogen so that a temperature rise on the upstream-end reaction gases in the casing is prevented.

28. A process for controlling temperature of a water-generating reactor which has a catalyst in a casing that can activate reactivity of hydrogen and/or oxygen and in which hydrogen and oxygen are allowed to react at high temperatures to generate water, wherein positions for supplying gases to come in contact with the catalyst in the casing are scattered to reduce reaction amounts of oxygen and hydrogen so that temperature rises of upstream end reacting gas in the casing is prevented.

29. A process for forming a platinum coated catalyst layer in a water-generating reactor in which a platinum coated film formed on an inner wall surface of a metal reactor body having an inlet as well as a water and moisture gas outlet serves as a catalyst for activating a reactivity of hydrogen and oxygen supplied from the inlet, with the oxygen and hydrogen being brought into contact with the platinum coating film to generate water from the hydrogen and oxygen in the reactor, wherein the inner wall surface of the said metal reactor body is surface-treated by cleaning, then a barrier film of nonmetallic material of oxides or nitrides is formed on the inner wall surface of the reactor body, and thereafter the platinum coated film is formed on the barrier film.

30. The process for forming the platinum coated catalyst layer in the water-generating reactor of claim 29 wherein the barrier film is made of one of TiN, TiC, TiCN, TiAlN, Al_2O_3, Cr_2O_3, SIO_2, and CrN.

31. The process for forming the platinum coated catalyst layer in the water-generating reactor of claim 29 wherein the reactor body is made of stainless steel and the barrier film is a film made of TiN.

32. The process for forming the platinum coated catalyst layer in the water-generating reactor of claim 29, claim 30, or claim 31 wherein the thickness of the barrier film is 0.1 - 5 μm and the barrier film is formed by an ion plating method or a sputtering method.

33. The process for forming the platinum coated catalyst layer in the water-generating reactor of claim 29, claim 30, claim 31 or claim 32 wherein the thickness of the platinum coated film is 0.1 - 3 μm and at the same time the platinum coated film is formed by an ion plating method or a sputtering method.